IN THE CLAIMS:

Please amend the Claims as indicated below:

Claims 1-6 (**Canceled**)

7. (**Previously Presented**) A method to compensate for temperature dependence of a measuring device for measuring, the thickness of a coating comprising the steps of:

using a magnetic sensor element as the measuring device;

receiving a temperature signal corresponding to the internal resistance of the magnetic sensor element;

determining a correction factor using the temperature signal and temperature coefficients of the magnetic sensor element; and

correcting an output signal of the magnetic sensor element using the correction factor.

8. (**Previously Presented**) The method of claim 7, wherein the output signal of the magnetic sensor element is corrected by applying the correction factor to an input signal of the magnetic sensor element.

9. (**Currently Amended**) The method of claim 7, wherein the correction factor is determined by calculation, wherein the correction factor is determined by the following relationship:

$1 + [(\alpha + \beta) \times (T - T_o)]$, and

wherein α is a temperature coefficient of an output voltage of the magnetic sensor element, β is a temperature coefficient of the internal resistance of the magnetic sensor element, T is an ambient temperature, and T_o is a reference temperature.

Claims 10 and 11 (**Canceled**)

12. (**Previously Presented**) The method of claim 7, wherein the magnetic sensor element is a Hall-sensor element.

13. (**Previously Presented**) The method of claim 7, wherein the magnetic sensor element is a GMR-sensor element.

14. (**Previously Presented**) The method of Claim 7, wherein the temperature signal corresponds solely to the internal resistance of the magnetic sensor element.

15. (**Previously Presented**) The method of claim 14, wherein the output signal of the magnetic sensor element is corrected by applying the correction factor to an input signal of the magnetic sensor element.

16. (**Currently Amended**) The method of claim 14, wherein the correction factor is determined by calculation, wherein the correction factor is determined by the following relationship:

$1 + [(\alpha + \beta) \times (T - T_o)]$, and

wherein α is a temperature coefficient of an output voltage of the magnetic sensor element, β is a temperature coefficient of the internal resistance of the magnetic sensor element, T is an ambient temperature, and T_o is a reference temperature.

17. (**Previously Presented**) The method of claim 14, wherein the magnetic sensor element is a Hall-sensor element.

18. (**Previously Presented**) The method of claim 14, wherein the magnetic sensor element is a GMR-sensor element.